

**FORM R NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 DIVISION OF WATER QUALITY**

**R**

*Refer to Appropriate Completeness Checklist and Instructions. Provide All Applicable Information.  
 Please Print or Type. (Attach additional sheets if necessary)*

**SUPPLEMENTAL APPLICATION FORM TO NJPDES-1 FOR NJPDES RESIDUAL PERMITS**

**PART A: GENERAL INFORMATION**

**APPLICATION OVERVIEW:** Form R is divided into nine parts (A-I). All applicants for a NJPDES permit must complete Part A. The applicability of Parts B, C, D, E, F, G, H and I can be determined by reviewing section A4 of this form.

**A1. Screening Information**

1. Does/will the facility: (1) generate a residual or a hazardous waste as a by-product of wastewater treatment for which a NJPDES application is being made, (2) generate a residual from the treatment of water for public consumption, or (3) derive a material from residual?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If you answered "yes", go to question 2. If you answered "no", this application does not need to be completed; however, submit this page as documentation that no residual is produced.

2. If you answered "yes" to question 1 above, is the by-product produced a hazardous waste or is the residual manifested as if it were a hazardous waste?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, complete only Part A. If no, you must complete, at a minimum, Parts A, B and I.

**A2. Facility Information.**

- a. Name of facility: \_\_\_\_\_
- b. Facility contact. Name: \_\_\_\_\_  
 Title: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_
- c. Facility location:  
 Street or Route #: \_\_\_\_\_  
 County: \_\_\_\_\_  
 City or town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. Facility mailing address:  
 Street or Route #: \_\_\_\_\_  
 \_\_\_\_\_  
 City or town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**A3. Use and Disposal Sites.**

- a. **Amount of residual or hazardous waste:** Provide the total dry metric tons per latest 365-day period (calendar year) of residual or hazardous waste handled by the process/discharge for which the NJPDES application is being made.
- Total amount generated on-site at the facility: \_\_\_\_\_
- Total amount received from off-site: \_\_\_\_\_
- b. Provide the following information for each site on which the residual or hazardous waste indicated above from this facility is treated, transferred, used or disposed (attach additional sheets as necessary):
- Name of facility: \_\_\_\_\_
- Facility contact: Name \_\_\_\_\_
- Title \_\_\_\_\_ Phone ( ) \_\_\_\_\_
- Facility mailing address: \_\_\_\_\_
- Street or P.O. Box \_\_\_\_\_
- City or town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**A4. Additional Information.**

**Review the following outline to determine if Parts B through I of this form must be completed.**

**1. PART B: GENERATION OR PREPARATION**

Part B must be completed by applicants who either: 1) Generate a residual which is not being manifested as if it were a hazardous waste (for example, sewage sludge, water treatment residual, food processing residual); or 2) Derive a material from residual.

**2. PART C: ENVIRONMENTAL ASSESSMENT**

Part C provides guidance for preparing and submitting an Environmental Assessment as required under N.J.A.C. 7:14A-20.6. An Environmental Assessment is required for: (1) the locations where residuals are prepared for land application, (2) the location where residuals are or were placed on a surface disposal site, or (3) the location for residual transfer stations, or as otherwise determined by the Department under N.J.A.C. 7:14A-20.5. An Environmental Assessment is not required for each individual residual land application site. This requirement may also be waived by the Department if no additional infrastructure is proposed. (For example, if a domestic treatment works already has approval to operate anaerobic digesters and is applying for a permit to land apply the residual already generated from the digesters, an environmental assessment is not required.) Contact the Bureau of Pretreatment and Residuals at (609) 633-3823 for specific guidance on whether an environmental assessment is required.

**3. PART D: LAND APPLICATION OF RESIDUAL**

Part D must be completed by applicants who either: 1) Apply residual to the land; or 2) Prepare residual that is applied to the land by others. Applicants who meet either or both of the above criteria are exempted from this part if **all** of the residual generated is sent to another facility to be prepared for land application.

**4. PART E: SURFACE DISPOSAL**

Part E must be completed by applicants who own or operate a residual surface disposal site.

**5. PART F: OUT-OF-STATE GENERATORS**

Part F must be completed by out-of-state generators preparing residual for land application in the State of New Jersey.

**6. PART G: RESIDUAL TRANSFER STATION**

Part G must be completed by applicants who own or operate a residual transfer station.

**7. PART H: REED BEDS**

Part H must be completed by applicants who own or operate a residual reed bed management system.

**8. PART I: CERTIFICATION**

Part I must be completed by all applicants required to complete information under Parts B through H above.

**For copies of Parts B through I, contact the Bureau of Permits Management at (609) 984-4428. If you have specific questions or need assistance in completing application Form R, contact the Bureau of Pretreatment and Residuals at (609) 633-3823.**

## PART B. GENERATION OF RESIDUAL OR PREPARATION OF A MATERIAL DERIVED FROM RESIDUAL

**Part B must be completed by applicants who generate a residual by a process and/or discharge for which the NJPDES application is being made (including, but not limited to, sewage sludge, water treatment plant residual, and food processing residual), or derive a material from residual.**

### B1. Facility Information.

- a. Is this facility a Class 1 Sludge Management Facility? (Note: a domestic treatment works required to have an approved industrial pretreatment program is a Class 1 Sludge Management Facility. Other treatment works may be designated as Class 1 by the Department on a case-by-case basis.)  
       \_\_\_\_\_ Yes      \_\_\_\_\_ No
- b. Facility design influent flow (wastewater) rate, if applicable: \_\_\_\_\_ mgd
- c. Total population served, if applicable: \_\_\_\_\_
- d. For residual management operations (e.g. incinerator, stabilization operation, etc.):  
     Maximum Daily Capacity: \_\_\_\_\_ (Dry Metric Tons/day)  
     Average Daily Capacity: \_\_\_\_\_ (Dry Metric Tons/day)
- e. Indicate the type(s) of facility:  
     \_\_\_\_\_ Publicly owned treatment works  
     \_\_\_\_\_ Privately owned treatment works  
     \_\_\_\_\_ Federally owned treatment works  
     \_\_\_\_\_ Residual blending or treatment operation  
     \_\_\_\_\_ Surface disposal site  
     \_\_\_\_\_ Industrial treatment works  
     \_\_\_\_\_ Other. If other, explain: \_\_\_\_\_

### B2. Line Drawing.

- a. Provide a line drawing of residual flow through the facility, and/or a narrative description that identifies all residual practices that will be employed during the term of the permit, including all processes used for collecting, dewatering, storing, or treating residual, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction (attach additional sheets as necessary).  
     \_\_\_\_\_  
     \_\_\_\_\_  
     \_\_\_\_\_
- b. Provide a description of residual use and disposal practices:  
     \_\_\_\_\_  
     \_\_\_\_\_  
     \_\_\_\_\_

**B3. Plot Plan.**

Where the following information is applicable, attach a Municipal Tax Map (clear copy or original) or equivalent plot plan as may be accepted by the Department drawn to scale depicting the following information:

1. The location of all sites at which residual is stored at the facility for which the NJPDES application is being made; and
2. The location of any sites where the applicant transfers or plans to transfer residuals for treatment and/or disposal.

**B4. Contractor Information.**

Are any operational or maintenance aspects of this facility related to residual generation, treatment, use or disposal the responsibility of a contractor?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, provide the following for each contractor (attach additional pages if necessary).

Name: \_\_\_\_\_

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_

Responsibilities of contractor:

\_\_\_\_\_  
\_\_\_\_\_

**B5. Residual Quality Information**

Provide a summary of all data submitted under the Sludge Quality Assurance Regulations (N.J.A.C. 7:14-4) for the previous 12-month period. If no data is available, a sample must be taken, analyzed and reported where required pursuant to the Sludge Quality Assurance Regulations (SQAR). For new facilities, a sample must be taken and analyzed within 90 days of the start of operation as required by SQAR.

**B6. Residual Amount Generated On Site.**

- a. Is domestic sewage included in the process where residual is generated?

\_\_\_\_\_ Yes \_\_\_\_\_ No (If yes, percent of total influent flow: \_\_\_\_\_%)

- b. Volume and types of residual generated on-site:

Water treatment plant residual (dry metric tons per 365-day period): \_\_\_\_\_

Food processing residual (dry metric tons per 365-day period): \_\_\_\_\_

Sewage sludge (dry metric tons per 365-day period): \_\_\_\_\_

Other: (describe: \_\_\_\_\_) (dry metric tons per 365-day period): \_\_\_\_\_

### **B7. Amount Received from Off Site.**

**If your facility receives, or will receive, residual from another facility for treatment, use, or disposal, provide the following information for each facility from which residual is received. If you receive residual from more than one facility, attach additional pages as necessary.**

- a. Facility Name: \_\_\_\_\_
- b. Contact Person: \_\_\_\_\_  
Phone number: \_\_\_\_\_
- c. Mailing address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- d. Facility address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- e. Total dry metric tons per 365-day period received from this facility: \_\_\_\_\_
- f. Describe any treatment processes known to occur at the off-site facility, including dewatering, blending and treatment to reduce pathogens or vector attraction characteristics:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **B8. Treatment Provided at Your Facility.**

- a. What type of pathogen reduction is provided for residual at your facility?  
\_\_\_\_\_ Class A      \_\_\_\_\_ Class B      \_\_\_\_\_ None or unknown
- b. Describe any treatment processes used at your facility to reduce pathogens in residual:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- c. Is vector attraction reduction provided for residual at your facility?  
\_\_\_\_\_ Yes      \_\_\_\_\_ No

**B8. Treatment Provided at Your Facility (continued).**

- d. If yes, which vector attraction option is met for the residual at your facility?
- \_\_\_\_\_ Option 1 (Minimum 38 percent reduction in volatile solids)
- \_\_\_\_\_ Option 2 (Anaerobic process, with bench-scale demonstration)
- \_\_\_\_\_ Option 3 (Aerobic process, with bench-scale demonstration)
- \_\_\_\_\_ Option 4 (Specific oxygen uptake rate for aerobically digested residual)
- \_\_\_\_\_ Option 5 (Aerobic processes plus raised temperature)
- \_\_\_\_\_ Option 6 (Raise pH to 12 and retain at 11.5)
- \_\_\_\_\_ Option 7 (75 percent solids with no unstabilized solids)
- \_\_\_\_\_ Option 8 (90 percent solids with unstabilized solids)
- \_\_\_\_\_ None or unknown
- e. Describe any treatment processes used at your facility to reduce vector attraction properties of residual:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- f. Describe any other residual treatment or blending activities not identified above (including dewatering):
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**B9. Preparation of Exceptional Quality Residual.**

**Complete Part B9 if residual from your facility meets the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, the Class A pathogen reduction requirements in 40 CFR 503.32(a), and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1)-(8) and is land applied. Skip this part if residual from your facility does not meet all of these criteria.**

- a. Total dry metric tons per 365-day period of residual subject to this part that is applied to the land:
- \_\_\_\_\_
- b. Is residual subject to this part placed in bags or other containers for sale or give-away for application to land?
- \_\_\_\_\_ Yes                      \_\_\_\_\_ No

**B10. Sale or Give-Away in a Bag or Other Container for Application to the Land.**

**Complete Part B10 if you place residual in a bag or other container for sale or give-away for land application.**

- a. Total dry metric tons per 365-day period of residual placed in a bag or other container at your facility for sale or give-away for application to the land: \_\_\_\_\_

**B11. Shipment Off-Site for Treatment or Blending.**

**Complete Part B11 if residual from your facility is provided to another facility that provides treatment or blending. Skip this part if the residual is covered in Parts B9 or B10. If you provide residual to more than one facility, attach additional pages as necessary.**

- a. Name of receiving facility: \_\_\_\_\_
- b. Facility Contact. Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone Number: (\_\_\_\_) \_\_\_\_\_
- c. Facility mailing address:  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. Total dry metric tons per 365-day period provided to this facility: \_\_\_\_\_
- e. Does the receiving facility provide additional treatment to reduce pathogens in residual from your facility? \_\_\_\_\_ Yes \_\_\_\_\_ No  
Which class of pathogen reduction is achieved for the residual at the receiving facility?  
\_\_\_\_\_ Class A \_\_\_\_\_ Class B \_\_\_\_\_ Pathogen-free or none
- f. Describe any treatment processes used at the receiving facility to reduce pathogens in residual:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the residual? \_\_\_\_\_ Yes \_\_\_\_\_ No

**B11. Shipment Off-Site for Treatment or Blending (continued).**

- h. Which vector attraction reduction option is met for the residual at the receiving facility?
- \_\_\_\_\_ Option 1 (Minimum 38 percent reduction in volatile solids)
- \_\_\_\_\_ Option 2 (Anaerobic process, with bench-scale demonstration)
- \_\_\_\_\_ Option 3 (Aerobic process, with bench-scale demonstration)
- \_\_\_\_\_ Option 4 (Specific oxygen uptake rate for aerobically digested residual)
- \_\_\_\_\_ Option 5 (Aerobic processes plus raised temperature)
- \_\_\_\_\_ Option 6 (Raise pH to 12 and retain at 11.5)
- \_\_\_\_\_ Option 7 (75 percent solids with no unstabilized solids)
- \_\_\_\_\_ Option 8 (90 percent solids with unstabilized solids)
- \_\_\_\_\_ None or unknown
- i. Describe any treatment processes used at the receiving facility to reduce vector attraction properties of residual:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- j. Describe any other residual treatment or blending activities not identified above:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- k. If you answered yes to any of the above, what information do you provide the receiving facility with to comply with the "notice and necessary information" requirement of 40 CFR 503.12(g).
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- l. Does the receiving facility place residual from your facility in a bag or other container for sale or give-away for application to the land?
- \_\_\_\_\_ Yes                      \_\_\_\_\_ No

If yes, provide a copy of all labels or notices that accompany the product being sold or given away.



## B12. Land Application of Bulk Residual.

**Complete Part B12 if residual from your facility is applied to the land, unless the residual is covered in Parts B9, B10 or B11 above.**

a. Total dry metric tons per 365-day period of residual applied to all land application sites: \_\_\_\_\_

b. Did you identify all land application sites in Part D of this application?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, submit a copy of the notification plan with this application (see Part D).

c. Are any land application sites located in States other than New Jersey?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, describe how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

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## B13. Surface Disposal.

**Complete Part B13 if residual from your facility is placed on a surface disposal site (monofill).**

a. Total dry metric tons per 365-day period of residual placed on all surface disposal sites: \_\_\_\_\_

b. Do you own or operate all surface disposal sites to which you send residual?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, answer the following for each surface disposal site that you do not own or operate (attach additional sheets as necessary).

c. Site Name: \_\_\_\_\_

d. Facility Contact. Name \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: (\_\_\_\_\_) \_\_\_\_\_

e. Facility mailing address:

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

f. Total dry metric tons per 365-day period of residual from your facility placed on this surface disposal site: \_\_\_\_\_

**B14. Incineration.****Complete Part B14 if residual from your facility is fired in an incinerator.**

a. Total dry metric tons per 365-day period of residual fired in an incinerator: \_\_\_\_\_

b. Do you own or operate all incinerators to which you send residual?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, answer the following for each incinerator that you do not own or operate (attach additional sheets as necessary).

c. Site Name: \_\_\_\_\_

b. Facility Contact. Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: (\_\_\_\_\_) \_\_\_\_\_

c. Facility mailing address:

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

d. Total dry metric tons per 365-day period of residual from your facility fired at this incinerator: \_\_\_\_\_

**B15. Disposal in a Municipal Solid Waste Landfill.****Complete Part B15 if residual from your facility is placed in a municipal solid waste landfill.**

a. Total dry metric tons per 365-day period of residual placed in a municipal solid waste landfill: \_\_\_\_\_

b. Do you own or operate all municipal solid waste landfills to which you send residual?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If no, answer the following for each municipal solid waste landfill that you do not own or operate (attach additional sheets as necessary).

c. Site Name: \_\_\_\_\_

d. Facility Contact. Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone Number: (\_\_\_\_\_) \_\_\_\_\_

e. Facility mailing address:

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

f. Total dry metric tons per 365-day period of residual from your facility placed in this municipal solid waste landfill: \_\_\_\_\_

g. Submit, with this application, information necessary to determine whether the residual meets applicable requirements for disposal of residual in a municipal solid waste landfill (for example, results of paint filter liquid test and TCLP test).

## PART C: ENVIRONMENTAL ASSESSMENT

**All applicants for a permit for residual use or disposal must submit an environmental assessment for the location where residual will be prepared to be applied to the land, the location where residual was placed on a surface disposal site, or the location of any other residual-only facility required to obtain a permit pursuant to N.J.A.C. 7:14A-20. The environmental assessment shall, at a minimum, address the following requirements:**

### C1. Facility Operations.

- a. Provide a written description of facility operations, including methods of residual handling, facility layout (attach facility map), and use or disposal of any end products.

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- b. Volume and types of residual to be handled:

Sewage Sludge (dry metric tons per 365-day period): \_\_\_\_\_

Food processing residual (dry metric tons per 365-day period): \_\_\_\_\_

Water treatment residual (dry metric tons per 365-day period): \_\_\_\_\_

Other: (describe: \_\_\_\_\_)(dry metric tons per 365-day period): \_\_\_\_\_

### C2. Environmental Impact and Local Land Use Evaluation.

1. Provide an analysis of the impact that the proposed treatment works treating domestic sewage or residual only facility will have on local transportation patterns, drainage and soil characteristics, surface and ground water quality, endangered or threatened wildlife and vegetation, storm water and wastewater collection/treatment capability, water supply capability, ambient acoustical conditions and air quality. Refer to Section 2 of the Bureau of Pretreatment and Residual's Technical Manual for Residual Permits for guidance on completion of the Environmental Assessment.
2. Attach a description on how the proposed operation will conform or conflict with the objectives of any applicable Federal, State, or local land use and/or environmental requirements for areas within two miles of the perimeter of a proposed large facility (residual production equal to or greater than 15,000 metric tons per 365 day period), or within one mile of the perimeter of a proposed small facility (residual production less than 15,000 metric tons per 365 day period). Refer to Section 2 of the Bureau of Pretreatment and Residual's Technical Manual for Residuals Permits for guidance on completion of the Environmental Assessment.

**PART D: LAND APPLICATION**

**All applicants for a NJPDES permit to prepare residual for land application shall submit the following, unless the text clearly indicates otherwise.**

**D1. Residual Information.**

**Information on the characteristics of each residual proposed to be applied, to the extent known at the time that the permit application is submitted, including:**

- a. Is all residual to be prepared for land application generated on-site?

\_\_\_\_\_ Yes          \_\_\_\_\_ No

If no, describe here the method for transporting the residual from the site of generation to the site of treatment. In addition, attach a map of transportation routes to be used in transporting residuals:

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- b. List here the origin and quantity (in dry metric tons per 365 day period) of each residual to be processed. For each residual to be processed from off-site sources estimate the approximate number of round trips made per day:

<u>ORIGIN</u>	<u>NJPDES #</u>	<u>QUANTITY</u>	<u>ROUND TRIPS</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- c. A dated analysis of each residual on a mg/kg dry weight basis (or other unit as specified), at a minimum, for the following constituents:

Total Solids (% by weight)	pH (standard units)
Total Kjeldahl Nitrogen (TKN)	Ammonia-Nitrogen (NH <sub>4</sub> -N)
Nitrate-Nitrogen (NO <sub>3</sub> -N)	Calcium (Ca)
Potassium (K)	Phosphorus (P)
Arsenic	Cadmium
Copper	Lead
Mercury	Molybdenum
Nickel	Selenium
Zinc	

- d. A summary of all data submitted under the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14-4, for the previous 12-month period;

- e. Additional quality analyses (including characteristics pursuant to N.J.A.C. 7:26G) may be required by the Department after evaluation of past SQAR reports or other relevant information, such as information on industrial discharges which might contribute constituents not normally evaluated under the SQAR program or which may exceed levels identified in USEPA's Technical Support Document for Land Application of Sewage Sludge, EPA 822/R-93-001a and 001b, November 1992.

### **D1. Residual Information (continued).**

- f. For residuals generated at industrial treatment works, describe below all industrial processes which generate residual intended to be land applied, including a listing of all raw materials undergoing processing, and all physical and/or chemical additives introduced:

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### **D2. Evaluation for non-domestic residual.**

**For the land application of residuals other than sewage sludge, water treatment plant residual, or food processing residual, the applicant must submit a detailed report which demonstrates the following:**

- That the land application of the residual will benefit soil physical properties, soil fertility and/or cover vegetation;
- An understanding of the impacts of the residual on soil fertility, soil physical properties and plant growth; and
- That the land application of a particular residual has a scientific basis and has been successfully tested or demonstrated in a field application or pilot program.

### **D3. Topographic Map.**

**Provide a topographic map that shows the following items of information. Map(s) must include the area one mile beyond all property boundaries of the facility.**

- Location of all residual treatment, storage, or disposal facilities, including land application sites and locations where residual is generated, treated or disposed in the map area;
- Location of all surface water bodies in the map area;
- Location of all wells used for drinking water listed in public records or otherwise known to the applicant in the map area.

**D4. Land Application Program and Process Information.**

**Refer to Appendices A through C in the Bureau of Pretreatment and Residual's Technical Manual to determine the quality requirement, pathogen reduction requirement, and vector attraction reduction requirement applicable to your facility. Circle each of the applicable requirements in the table below. The program where all three requirements are circled is the one applicable for your facility. See the program description in the BPR's technical manual for further information.**

PROGRAM	Quality Requirements Appendix A	Pathogen Reduction Requirements Appendix B	VAR Requirements Appendix C
Program 1	Column 2	Class A	(1)-(8)
Program 2	Column 2	Class A	(9) or (10)
Program 3	Column 2	Class B	Any
Program 4	Column 1	Class A	(1)-(8)
Program 5	Column 1	Class A	(9) or (10)
Program 6	Column 1	Class B	Any

- a. Which pathogen reduction alternative is intended to be met for the residual at your facility?
- \_\_\_\_\_ Class A/Alternative 1 (Thermally treated residual, specify 1A, 1B, 1C, or 1D from 40 CFR 503)
- \_\_\_\_\_ Class A/Alternative 2 (Residuals treated in a High pH – High temperature process)
- \_\_\_\_\_ Class A/Alternative 3 (Residuals treated in other known processes)
- \_\_\_\_\_ Class A/Alternative 4 (Residuals treated in unknown processes)
- \_\_\_\_\_ Class A/Alternative 5 (Residuals treated in a PFRP)
- \_\_\_\_\_ Class A/Alternative 6 (Residuals treated in a process equivalent to a PFRP)
- \_\_\_\_\_ Class B/Alternative 1 (Monitoring of indicator organisms)
- \_\_\_\_\_ Class B/Alternative 2 (Residuals treated in PSRP)
- \_\_\_\_\_ Class B/Alternative 3 (Residuals treated in a process equivalent to a PSRP)
- \_\_\_\_\_ Pathogen-free, none or unknown
- b. Describe, in detail, the treatment processes used at your facility to reduce pathogens in residual (attach additional sheets as necessary):

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**D4. Land Application Program and Process Information (continued).**

- c. Describe how information to demonstrate compliance with pathogen reduction requirements will be obtained, where samples to demonstrate compliance will be taken, and how records will be kept (attach additional sheets as necessary):

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- d. Are any vector attraction reduction requirements met when residual is applied to the land application site?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

If yes, indicate which vector attraction reduction option is met:

\_\_\_\_\_ Option 9 (injection below land surface)

\_\_\_\_\_ Option 10 (incorporation into soil within 6 hours)

- e. Describe, in detail, the treatment processes used at your facility for vector attraction reduction (attach additional sheets as necessary):

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- f. Describe how information to demonstrate compliance with vector attraction reduction requirements will be obtained, where samples to demonstrate compliance will be taken, and how records will be kept (attach additional sheets as necessary):

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- g. Describe the mode of transporting the product to distribution sites:

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- h. How long will the final product be stored on-site prior to ultimate management?

Average operation: \_\_\_\_\_ days

Peak operation: \_\_\_\_\_ days

For each new structure used to store marketable residual product at the processing facility, submit an "Engineer's Certification of Proper Design for Residual Storage Installations" (See the Bureau of Pretreatment and Residuals Technical Manual for Residuals Management - Appendix I). Note: storage installations used to store residual which has not been processed, or which is not a marketable residual product are required to receive a Treatment Works Approval pursuant to N.J.A.C. 7:14A-22 and -23.

#### **D4. Land Application Program and Process Information (continued).**

- i. Describe all process additives, including quantity required, source, trade names, and chemical analysis where available (for example, wood chips, oil, alkaline source etc.):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- j. Attach a descriptive statement of the process used and operation of the proposed facility. Within this format, provide a description and detailed specifications of all process steps (including but not limited to residual delivery, storage, mixing, stabilization method, curing, screening) and the related equipment, pollution control systems, instrumentation and monitoring mechanisms. Within the context of the system description, identify the mix ratio of additives to residual.
- k. Provide a comprehensive materials balance for the proposed system/operation. The materials balance shall account for every handling and processing step starting from residual delivery to the facility and ending with final product removal from the site.

#### **D5. Identification of Land Application Sites.**

**For bulk residual which does not satisfy the pollutant concentrations in 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), or one of the vector attraction reduction options in 40 CFR 503.33(b)(1) through (b)(8) (that is, a program 2 through 6 residual identified above), for each residual land application site identified at the time of permit application, the applicant shall, supply information necessary to determine if the site is appropriate for land application and a description of how the site is or will be managed. Identify each residual land application site known at the time of permit application below. In addition LLAMA application forms 1 through 4 must be submitted for each residual land application site.**

- a. Site name or number: \_\_\_\_\_
- b. Site location:  
 Street or Route Number: \_\_\_\_\_  
 County: \_\_\_\_\_ Lot: \_\_\_\_\_ Block: \_\_\_\_\_  
 City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- c. Are any groundwater monitoring data available for this land application site?  
 \_\_\_\_\_ Yes                      \_\_\_\_\_ No

If yes, submit a summary of the ground water monitoring data with this permit application. Also provide a written description of the well locations, approximate depth to groundwater, and the groundwater monitoring procedures used to obtain the data.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



## D6. Notification Plan.

**For bulk residual which does not satisfy the pollutant concentrations in 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), or one of the vector attraction reduction options in 40 CFR 503.33(b)(1) through (b)(8) (that is, a program 2 through 6 residual identified above), where proposed residual land application sites are not identified at the time of permit application, the applicant shall submit a notification plan for the Department's approval which at a minimum:**

- a. Describe the geographical area covered by the plan:
  
- b. Describe the form of advance public notice which, at a minimum, will be supplied to all landowners and occupants adjacent to or abutting a proposed residual land application site. This requirement may be satisfied through public notice in a newspaper of local circulation. Notice shall include, at a minimum, the name and address of the permittee, the name and address of the proposed residual land application site, a description of the activities that are proposed to occur at the residual land application site, and the name and address of the Bureau within the Department to which the permittee must submit an application for a Letter of Land Application Management Approval (See LLAMA Application Forms):

## D7. Exceptional Quality or Residual Sold or Given Away In a Bag or Other Container.

**For bulk residual which meets the ceiling concentrations in Table 1 of 40 CFR 503.13, the pollutant concentrations in Table 3 of 40 CFR 503.13, the Class A pathogen requirements in 40 CFR 503.32(a), and one of the vector attraction reduction options in 40 CFR 503.33(b)(1) through (b)(8), or for any residual which is sold or given away in a bag or other container, the applicant shall:**

- a. Provide documentation that the residual product has been, or will be, licensed by the New Jersey Department of Agriculture pursuant to the New Jersey Commercial Fertilizer and Soil Conditioner Act, N.J.S.A. 4:9-15.1 et seq., or the New Jersey Agricultural Liming Materials Act, N.J.S.A. 4:9-21.1 et seq.
- b. Provide a copy of the label or instructional literature that will be used to conform to the labeling requirements established by the New Jersey Department of Agriculture pursuant to the New Jersey Commercial Fertilizer and Soil Conditioner Act, N.J.S.A. 4:9-15.1 et seq., the New Jersey Agricultural Liming Materials Act, N.J.S.A. 4:9-21.1 et seq., and/or the Bureau of Pretreatment and Residuals Technical Manual for Residuals Management (see Section 5).
- c. Provide below, or attach additional sheets as necessary, information to demonstrate optimal marketable residual product characteristics, including temperature, total solids and odor characteristics. Include a listing of existing operational facilities of the type proposed:

## PART E. SURFACE DISPOSAL

Complete this part only if you own or operate a residual surface disposal site.

### E1. Information on Residual Units

- a. Unit name or number: \_\_\_\_\_
- b. Unit location: \_\_\_\_\_  
\_\_\_\_\_
- c. Total dry metric tons of residual placed on the active residual unit per 365-day period:  
\_\_\_\_\_
- d. Total dry metric tons of residual placed on the active unit over the life of the unit:  
\_\_\_\_\_
- e. Does the active residual unit have a liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
- f. If yes, describe the liner (or attach a description):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- g. Does the active residual unit have a leachate collection system?  
\_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, describe the leachate collection system. Also describe the method used for leachate disposal:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- h. If you answered no to either E.1.e or E.1.g., answer the following question:  
Is the boundary of the residual unit less than 150 meters from the property line of the surface disposal site? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, provide the actual distance in meters: \_\_\_\_\_
- i. Remaining capacity of active residual unit in dry metric tons: \_\_\_\_\_
- j. Anticipated or actual closure date for the residual unit: \_\_\_\_\_
- k. Provide a copy of any closure plan that has been developed for this active residual unit. A surface disposal site closure plan shall include the information in E5 below.

**E2. Topographic Map.**

**Provide a topographic map that shows the following items of information. Map(s) must include the area one mile beyond all property boundaries of the facility.**

- Location of all residual treatment, storage, or disposal facilities, including land application sites and locations where residual is generated, treated or disposed in the map area;
- Location of all surface water bodies in the map area;
- Location of all wells used for drinking water listed in public records or otherwise known to the applicant in the map area.

**E3. Residual from other facilities**

- a. Is residual sent to this active residual unit from any other facilities other than your facility?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, provide the following information for each facility. If residual is sent to this active residual unit from more than one such facility, attach additional pages as necessary.

Facility Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone number: (\_\_\_\_\_) \_\_\_\_\_

Mailing address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b. Which class of pathogen reduction is achieved before residual leaves the other facility?

\_\_\_\_\_ Class A \_\_\_\_\_ Class B \_\_\_\_\_ Pathogen-free or none

- c. Describe any treatment processes used at the other facility to reduce pathogens in residual:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- d. Which vector attraction option is achieved before residual leaves the other facility?

\_\_\_\_\_ Option 1 (Minimum 38 percent reduction in volatile solids)

\_\_\_\_\_ Option 2 (Anaerobic process, with bench-scale demonstration)

\_\_\_\_\_ Option 3 (Aerobic process, with bench-scale demonstration)

\_\_\_\_\_ Option 4 (Specific oxygen uptake rate for aerobically digested residual)

\_\_\_\_\_ Option 5 (Aerobic processes plus raised temperature)

\_\_\_\_\_ Option 6 (Raise pH to 12 and retain at 11.5)

\_\_\_\_\_ Option 7 (75 percent solids with no unstabilized solids)

\_\_\_\_\_ Option 8 (90 percent solids with unstabilized solids)

\_\_\_\_\_ None or unknown

**E3. Residual from other facilities (continued).**

- e. Describe any treatment processes used at the other facility to reduce vector attraction properties of residual:

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- f. Describe any other residual treatment activities performed by the other facility not identified above:

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**E4. Vector Attraction Reduction.**

- a. Other than the vector attraction reduction options listed in Part B, which vector attraction reduction option below, if any, is met when residual is placed on the active residual unit?

\_\_\_\_\_ Option 9 (Injection below land surface)  
\_\_\_\_\_ Option 10 (Incorporation into soil within 6 hours)  
\_\_\_\_\_ Option 11 (Covering active residual unit daily)

- b. Describe, on this form or another sheet of paper, any treatment processes used at the active residual unit to reduce vector attraction properties of residual:

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**E5. Surface disposal site closure plan.**

- a. Approximate date discharge to the surface disposal site ceased: \_\_\_\_\_

- b. A description of the surface disposal site including:

approximate acreage: \_\_\_\_\_

lateral and vertical extent: \_\_\_\_\_

The origin and volume of the residual remaining in the surface disposal site: \_\_\_\_\_

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**E5. Surface disposal site closure plan (continued).**

- c. Dated quality analyses of the residual on a mg/kg dry weight basis including analyses of all constituents required to be analyzed in accordance with the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14-4. The number of samples required to be analyzed shall be based on a statistical method as described in the Department's Field Sampling Procedures Manual, or as otherwise approved by the Department.

Additional quality analyses may be required if deemed necessary by the Department through evaluation of past SQAR reports or other relevant information, such as information on industrial discharges which might contribute constituents not normally evaluated under the SQAR program.

- d. Explain how pathogen requirements or vector attraction reduction requirements were achieved:

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- e. Describe the proposed method of closure, including plans for the removal and/or in-situ closure of the residual remaining at the surface disposal site, and an implementation schedule for each component of the closure plan:

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For in-situ closure proposals, the following information:

- a. Is the closed surface disposal site located in a floodplain, or can the closed surface disposal site restrict the flow of a base flood? If yes, describe:

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- b. Is the closed surface disposal site located in an unstable area? If yes, describe:

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- c. Does the surface disposal site have a liner and/or leachate collection system?

\_\_\_\_\_ Liner only      \_\_\_\_\_ Leachate collection only      \_\_\_\_\_ Both      \_\_\_\_\_ None

If the surface disposal site has a liner and/or leachate collection system, describe how the leachate collection system will be operated and maintained for a minimum of five years and/or describe the liner:

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**E5. Surface disposal site closure plan (continued).**

- d. If a cover is to be placed over the closed surface disposal site, provide a description of the system used to monitor for methane gas in the air in any structures within the surface disposal site and in the air at the property line of the surface disposal site for a minimum of five years:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- e. Describe how public access to the surface disposal site will be restricted for a minimum of five years:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- f. Provide a calculation of the surface run-off across the surface disposal site using a 24-hour, 25-year storm event with estimates of the effect of such run-off on treatment capacity, storage capacity, erosion, flooding, impacts on surface water quality and related details:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- g. Attach a copy of the detailed description of the surface disposal site recorded, along with the deed, with the appropriate county recording office.
- h. Attach a Soil Erosion and Sediment Control Plan certified or approved in accordance with the Soil Erosion and Sediment Control Act (N.J.S.A. 4:24-39 et seq.), unless such planning is determined inapplicable by an agency with concurrent jurisdiction.

**E6. Ground Water Monitoring.**

- a. Is ground water monitoring currently conducted at the active or closed residual unit?
- \_\_\_\_\_ Yes          \_\_\_\_\_ No
- If yes, submit a summary of ground water monitoring data with this permit application. Also, submit information on well construction, a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.
- b. Has a ground water monitoring program been prepared for the active or closed residual unit?
- \_\_\_\_\_ Yes          \_\_\_\_\_ No
- If yes, submit a copy of the ground water monitoring program with this permit application.

FACILITY NAME: \_\_\_\_\_ NJPDES PERMIT NO.: \_\_\_\_\_  
(new applicants leave blank)

FORM R - 23  
Rev. 04/23/98

## PART F: OUT-OF-STATE GENERATORS

Please be advised that distribution or land application of an out-of-state Marketable Residual Product in New Jersey requires issuance of a NJDEP approval, which may include issuance of a NJPDES permit, in accordance with N.J.A.C. 7:14A-20.7(l). Out-of-state generators which transport residual into the State of New Jersey to be applied to the land shall, at a minimum, submit the following.

### F1. Additional Information.

Out-of-state generators which transport residual into the State of New Jersey to be applied to the land shall, at a minimum, submit the following additional notice requirements:

- a. Information as required to be submitted pursuant to Parts A, B and D above, and Part I below, as applicable.
- b. Copies of those permits and approvals issued by the permitting authority for the state in which the residual is prepared.
- c. Permitting authority information for the state in which the residual is prepared:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: (    ) \_\_\_\_\_

- d. List any brand names under which the marketable residual product will be distributed:

\_\_\_\_\_

- e. The approximate time period during which bulk residual will be applied to each residual land application site identified in Part D above: \_\_\_\_\_

## PART G: RESIDUAL TRANSFER STATIONS

**Complete this part only if you own or operate a residual transfer station.**

### G1. Residual Information.

**Information on the characteristics of each residual received, to the extent known at the time that the permit application is submitted, including:**

- a. Describe here the method for transporting the residual from the site of generation to the residual transfer station. In addition, attach a map of transportation routes to be used in transporting residuals:

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- b. List here the origin and quantity (in dry metric tons per 365 day period) of each residual to be processed. For each residual to be processed estimate the approximate number of round trips made per day:

<u>ORIGIN</u>	<u>NJPDES #</u>	<u>QUANTITY</u>	<u>ROUND TRIPS</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

- c. A summary of all data submitted under the Sludge Quality Assurance Regulations (SQAR), N.J.A.C. 7:14-4, for the previous twelve month period;
- d. Additional quality analyses (including characteristics pursuant to N.J.A.C. 7:26G) may be required by the Department after evaluation of past SQAR reports or other relevant information, such as information on industrial discharges which might contribute constituents not normally evaluated under the SQAR program or which may exceed levels identified in USEPA's Technical Support Document for the ultimate management alternative used by the transfer station.
- e. Describe the mode of transporting residual from the transfer station to the ultimate management site:

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- f. How long will residual be stored on-site prior to ultimate management?

Average operation: \_\_\_\_\_ days

Peak operation: \_\_\_\_\_ days

Note: storage installations used to store residual are required to obtain a Treatment Works Approval pursuant to N.J.A.C. 7:14A-22 and -23.



### **G1. Residual Information (continued).**

- g. Describe all process additives, including quantity required, source, trade names, and chemical analysis where available:

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- h. Attach a descriptive statement of the process used and operation of the proposed facility. Within this format, provide a description and detailed specifications of all process steps (including but not limited to residual delivery, storage, mixing, dewatering, and any stabilization method) and the related equipment, pollution control systems, instrumentation and monitoring mechanisms.

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- i. Provide a comprehensive materials balance for the proposed system/operation. The materials balance shall account for every handling and processing step starting from residual delivery to the facility and ending with final removal of residual from the site.

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### **G2. Topographic Map.**

**Provide a topographic map that shows the following items of information. Map(s) must include the area one mile beyond all property boundaries of the facility.**

- Location of all residual treatment, storage, or disposal facilities, including land application sites and locations where residual is generated, treated or disposed in the map area;
- Location of all surface water bodies in the map area;
- Location of all wells used for drinking water listed in public records or otherwise known to the applicant in the map area.

## PART H. REED BEDS

Complete this part only if you own or operate a reed bed.

### H1. Information on Active Residual Units

- a. Number of residual units or drying beds: \_\_\_\_\_
- b. Unit name or number:      Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet  
    Bed # \_\_\_\_\_ size: \_\_\_\_\_ square feet
- c. Total gallons of residual placed on the active residual units per 365-day period: \_\_\_\_\_
- d. Average total solids of residual: \_\_\_\_\_ %
- e. Loading (divide item c by total square feet in item b): \_\_\_\_\_ gallons per sq. ft. per year
- f. Type of residual(s) to be loaded:      Aerobic      \_\_\_\_\_      Anaerobic      \_\_\_\_\_  
    Alum      \_\_\_\_\_      Primary      \_\_\_\_\_  
    Other      \_\_\_\_\_ (describe: \_\_\_\_\_)
- g. Does the active residual unit have a liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?  
       \_\_\_\_\_ Yes      \_\_\_\_\_ No  
 If yes, describe the liner (or attach a description):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- h. Does the active residual unit have a leachate collection system?  
       \_\_\_\_\_ Yes      \_\_\_\_\_ No  
 If yes, describe the leachate collection system. Also describe the method used for leachate disposal:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## **H1. Information on Active Residual Units (continued)**

- i. If you answered no to either H.1.f or H.1.g., answer the following question:  
Is the boundary of the residual unit less than 150 meters from the property line of the surface disposal site? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If yes, provide the actual distance in meters: \_\_\_\_\_
- j. Anticipated next evacuation or closure date for active residual unit, if known: \_\_\_\_\_
- k. Provide a copy of any evacuation or closure plan that has been developed for this active residual unit.

## **H2. Topographic Map.**

**Provide a topographic map that shows the following items of information. Map(s) must include the area one mile beyond all property boundaries of the facility.**

- a. Location of all residual treatment, storage, or disposal facilities, including land application sites and locations where residual is generated, treated or disposed in the map area;
- b. Location of all surface water bodies in the map area.

## PART I: CERTIFICATION

### Read and submit the following certification statement with this application.

Indicate which parts of Form R you have completed and are submitting:

- ☐ Part A (General Information)
- ☐ Part B (Generation of residual or preparation of a material derived from residual)
- ☐ Part C (Environmental Assessment)
- ☐ Part D (Land Application)
- ☐ Part E (Surface Disposal)
- ☐ Part F (Out-of-state Generators)
- ☐ Part G (Residual Transfer Stations)
- ☐ Part H (Reed Beds)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information.

Signature of Officer: \_\_\_\_\_

Name of Officer: \_\_\_\_\_  
(type or print)

Official Title: \_\_\_\_\_

Telephone Number: (\_\_\_\_) \_\_\_\_\_

Date Signed: \_\_\_\_\_